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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,195	10/31/2001	Blaine D. Gaither	10017481 -1	5798

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER	
ELMORE, REBA I	

ART UNIT	PAPER NUMBER
2187	

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/004,195	GAITHER ET AL.	
	Examiner	Art Unit	
	Reba I. Elmore	2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-8 are presented for examination.

Specification

2. The amendments to pages 4 and 5 have been entered.

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Double Patenting

4. The rejection based on double patenting against application 10/001586 is ***maintained*** and repeated below.

5. The rejection based on double patenting against application 10/001584, now patent number 6,813,691 is ***maintained*** and repeated below.

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-8 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of copending Application No. 10/001,586. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasoning given below in the representative comparison of the compared claims. A detailed comparison has been written for one claim in the present invention in conflict with the claims of the conflicting application, however, the double patenting rejection is applied to all of the claims of the present invention as being in conflict based on obviousness type double patenting with all of the claims of the conflicting application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10/004195	***10/001586***
1. A method of improving performance of a computer system, comprising:	1. A method for evicting an entry in a cache memory, comprising:
(a) specifying a time period;	setting a bit to a first logical state when the entry is accessed; *is equivalent to specifying a time period in that a bit is set when determining the state of a cache entry*
(b) evicting, from a cache memory, at least one entry that has remained	evicting the entry when the bit is at the second logical state after at least a

unchanged for at least the time period;	predetermined time after being set to the second logical state. with the second logical state being equivalent to an entry not changing for a period of time
(c) measuring at least one performance parameter;	setting the bit to a second logical state;
(d) changing the value of the time period;	
(e) repeating steps (b) and (c); and	
(f) determining whether the performance parameter has changed.	

The present claimed invention and the conflicting claims are not exactly the same, however, the sets of claims are not patentably distinct. The present invention is claimed more broadly in that the setting of the logical states of bits is more specific than the broader language of specifying and changing a time period to determine whether or not a cache entry should be evicted. Also, the additional language of the present claimed invention involves measuring a performance parameter and determining whether or not the performance parameter has changed, however, there is not a nexus showing how the measuring and determining a change relates in any specific way to improving performance of a computer system or how this relates to evicting a cache entry. These differences are not sufficient to render the claim patentable distinct and therefore a terminal disclaimer is required (Georgia Pacific Corp v United States Gypsum Co., 52 USPQ2d 1590, US Court of Appeals Federal Circuit 1999).

8. Claims 1-8 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-9 of copending Application No. 10/001,584 now patent number 6,813,691. Although the conflicting claims are

not identical, they are not patentably distinct from each other because of the reasoning given below in the representative comparison of the compared claims. A detailed comparison has been written for one claim in the present invention in conflict with the claims of the conflicting application, however, the double patenting rejection is applied to all of the claims of the present invention as being in conflict based on obviousness type double patenting with all of the claims of the conflicting application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10/004,195	***10/004,584 (6,813,691)***
1. A method of improving performance of a computer system, comprising:	1. A method of improving performance of a computer system, comprising:
(a) specifying a time period;	(a) specifying a threshold; is equivalent as a time period can also be a threshold
	(b) determining the number of modified entries in a cache memory;
(b) evicting, from a cache memory, at least one entry that has remained unchanged for at least the time period;	(c) evicting, from a cache memory, at least one of the modified entries, when the number of modified entries in the cache memory exceeds the threshold;
(c) measuring at least one performance parameter;	(d) measuring the rate of cache-to-cache transfers; is equivalent as the rate of cache-to-cache transfers is a specific performance parameter
(d) changing the value of the time period;	(e) changing the value of the threshold;

(e) repeating (b) and (c); and	(f) repeating steps (b) and (c); and
(f) determining whether the performance parameter has changed.	(g) determining whether the rate of cache-to-cache transfers has changed.

The present claimed invention and the conflicting claims are not exactly the same, however, the sets of claims are not patentably distinct. The present invention is claimed more broadly in that specifying a time period is broader than specifying a threshold or determining the number of modified entries in a cache memory. These differences are not sufficient to render the claim patentable distinct and therefore a terminal disclaimer is required (Georgia Pacific Corp v United States Gypsum Co., 52 USPQ2d 1590, US Court of Appeals Federal Circuit 1999).

"A latter patent claim is not patentable distinct from an earlier patent claim if the latter claim is obvious over, or anticipated by, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obvious-type double patenting because the claim at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obvious-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus). ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

35 USC § 102

9. The rejection of claims 1, 3-4 and 7-8 under 35 USC 102 is ***maintained*** and repeated below.

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

11. Claims 1, 3-4 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Talyansky et al.

12. Talyansky teaches the invention (claim 1) as claimed including a method of improving performance of a computer system, comprising:

(a) specifying a time period (e.g., see col. 4, lines 41-60);

(b) evicting, from a cache memory, at least one entry that has remained unchanged for at least the time period as the sync operation for a stale or old buffer condition (e.g., see col. 4, lines 41-60);

(c) measuring at least one performance parameter as measuring the age of the dirty buffers (e.g., see col. 3, lines 45-46);

(d) changing the value of the time period (e.g., see col. 4, lines 41-60);

(e) repeating steps (b) and (c) (e.g., see col. 4, lines 41-60); and,

(f) determining whether the performance parameter has changed (e.g., see Figure 1 and col. 4, lines 41-60).

As to claim 3, Talyansky teaches measuring how many evicted entries are access during a predetermined time span (e.g., see Figure 1 and col. 4, lines 41-60).

As to claim 4, Talyansky teaches evicting, from a cache memory, at least one modified entry that has remained unchanged for at least the time period (e.g., see Figure 1 and col. 4, lines 41-60).

As to claim 7, Talyansky teaches repeating steps (a) through (f) until the performance parameter is optimized (e.g., see col. 5, line 33 to col. 6, line 52).

As to claim 8, Talyansky teaches repeating steps (a) through (f) until the performance parameter changes (e.g., see col. 5, line 33 to col. 6, line 52).

Response to Applicant's Remarks

13. As to the remarks concerning the double patenting rejection using 10/001586, although the claims are used to determine double patenting, the specification clearly shows the setting of the logical states when entries are accessed is a broader claimed invention than the present invention. The further defining of the present invention is obvious over the conflicting claims.

14. As to the remarks concerning the double patenting rejection using 10/001584, the elements of the conflicting claims are directly equated to the elements of the present claims.

15. As for the Talyansky reference not teaching or suggesting changing the sync period, the cite given is (e.g., see col. 4, lines 41-60), this section discusses two different sync periods with the sync periods being different (also refer to Figure 1). This teaches the changing of the sync period. Also the reference discusses modification of the sync.

16. As for Talyansky reference not teaching or suggesting measuring a performance parameter, the reference discusses the state of the buffer which is always changing. As the performance parameter is not given in the claim language, the state of the buffer meets this limitation.

17. As for Talyansky reference not teaching or suggesting the limitations of claims 3-4 and 7-8, these claims are taught to the extent required by the actual limitations as the reference discusses evicting entries and optimizing or changing parameters.

18. The claims dealing with elements of a cache-to-cache transfer, these claims are removed from the 35 USC 102(b) rejection. These claims are 2, 5 and 6.

Action is made Final

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reba I. Elmore, whose telephone number is (703) 305-9706. The examiner can normally be reached on M-TH from 7:30am to 6:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the art unit supervisor for AU 2187, Donald Sparks, can be reached for general questions concerning this application at (703) 308-1756. Additionally, the official fax phone number for the art unit is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center receptionist whose telephone number is (703) 305-3800/4700.

Reba I. Elmore
Primary Patent Examiner
Art Unit 2187

March 29, 2005